**IN THE UNITED STATES DISTRICT COURT**
**FOR THE SOUTHERN DISTRICT OF TEXAS**
**HOUSTON DIVISION**

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| KELLY HOLT, *et al.*, | § | |
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| Plaintiffs, | § | |
| | § | |
| v. | § | CIVIL ACTION NO. H-16-2898 |
| | § | |
| ST. LUKE'S HEALTH SYSTEM, d/b/a CHI ST. LUKE'S PATIENTS MEDICAL CENTER, *et al.*, | § | |
| | § | |
| Defendants. | § | |

**MEMORANDUM & OPINION DENYING DR. TOW'S MOTION TO STRIKE**

The plaintiffs, the surviving family members of Jessie Holt, have sued St. Luke's Patients Medical Center, emergency-room physician Dr. Evan Tow, D.O., and Dr. Kevin Lisman over the events leading up to Jessie Holt's death in April 2016. The plaintiffs assert violations of the Emergency Medical Treatment and Labor Act (EMTALA), 42 U.S.C. § 1395dd, and common-law negligence against St. Luke's, where Holt was seen and treated in the St. Luke's Patients Medical Center emergency room on January 11, 2016; negligence against Dr. Lisman, Holt's cardiologist; and negligence against Dr. Tow, Holt's emergency-room doctor. This opinion addresses Dr. Tow's motion to strike portions of the expert witness testimony of Dr. John MacGregor, presented as part of the plaintiffs' opposition to Dr. Tow's motion for summary judgment.

As part of their summary judgment response, the plaintiffs presented expert witness testimony from Dr. MacGregor, a cardiologist, about the relevant standard of care, the ways in which Dr. Tow fell below that standard in treating Holt in the emergency room, and the causal connection between Dr. Tow's negligence and Holt's death three months after his emergency room

visit. Dr. Tow moves to strike portions of Dr. MacGregor's testimony, arguing that the opinions in those portions were unreliable and based on speculation. (Docket Entry No. 49). Dr. Tow disputes Dr. MacGregor's testimony that: (1) Holt was "pulseless" when he received CPR on January 11; (2) Holt suffered a cardiac arrest when he passed out on January 11; (3) Dr. Tow failed to obtain critical information that was available to him about what had happened to Holt on January 11; and (4) Dr. Tow's treatment proximately caused Holt's death three months later.

Dr. Tow does not argue that Dr. MacGregor is unqualified by either education or experience, reserving the right to raise that challenge at a later time. Instead, Dr. Tow challenges the facts Dr. MacGregor relied on and the conclusions he reached.

Based on a careful review of the motion to strike and the response, the record, and the applicable law, the court denies the motion to strike. The reasons are set out below.

## I. Background

### A. Factual Background

On January 11, 2016, Holt was running on a treadmill at 24 Hour Fitness when he passed out and fell. He turned blue, his arms began to curl up, and a bystander performed CPR. Holt was taken by ambulance to the emergency room at St. Luke's.

Holt had been diagnosed in July 2013 with severe aortic stenosis, a structural form of heart disease that restricts blood flow from the heart. Although Holt's aortic stenosis had progressively worsened and was categorized as either "severe" or "very severe," he was asymptomatic before 2016. Holt and his cardiologist, Dr. Lisman, had discussed valve-replacement surgery, but because he had not shown symptoms, Holt chose not to have the surgery.

When Holt arrived at St. Luke's on January 11, he first saw triage nurse Christina Hamlyn,

who assessed and categorized him as "emergency level priority 2." (Docket Entry No. 36, Ex. 1-A at 62). Nurse Hamlyn noted that Holt may have experienced a seizure, was "post-ictal," and had received CPR from a bystander at the gym. (*Id.*). Holt had "pulses" and was awake, but groggy. (*Id.*). Holt saw Dr. Tow shortly after his initial assessment. Dr. Tow noted Holt's prior diagnosis of aortic stenosis and that Holt had last seen his cardiologist in November 2015. (Docket Entry No. 36, Ex. 1-A at 50). Holt's medical records show that Dr. Tow did a physical examination and ordered several tests, including an electrocardiogram, a head CT, a chest x-ray, a blood panel, and a urine test. (*Id.* at 51, 55). Dr. Tow also ordered IV fluids and anti-nausea medication. About an hour later, Dr. Tow returned to Holt's exam room. Holt, alert and responsive, said that he was feeling better. (*Id.* at 51). Dr. Tow reviewed Holt's tests and diagnosed "heat exhaustion/syncope." (*Id.*).

Nurse Elbert Delacruz performed a discharge assessment less than two hours after Holt's admission to the emergency room. (Docket Entry No. 36, Ex. 1-A at 63). Holt's vital signs were recorded as normal. Nurse Delacruz provided him instructions for treating syncope and dehydration. (*Id.* at 63, 84–89). Dr. Tow examined Holt again before he left the hospital, prescribed anti-nausea medication, and counseled Holt on the diagnosis of dehydration. Dr. Tow recommended that Holt increase his fluid intake, stay indoors for the weekend, and follow up with his primary care doctor and cardiologist. (*Id.* at 52).

Holt called Dr. Lisman that evening and left a message relaying what had happened that day and the diagnosis he had received. The next day, Holt received a call from Dr. Lisman's medical assistant stating that Holt should stay hydrated and contact Dr. Lisman's office if it happened again. (Docket Entry No. 36, Ex. 2).

About three months later, on April 8, Holt again collapsed while jogging on a treadmill at the gym. An ambulance took Holt to the Bayshore Medical Center, where he was pronounced dead. An autopsy showed that the cause of death was cardiac arrest caused by Holt's untreated severe aortic stenosis.

The plaintiffs allege, in part, that given the information Dr. Tow had about Holt's history of severe aortic stenosis and the events at 24 Hour Fitness on January 11—that Holt had passed out while jogging, turned blue, his arms curled up, and he required CPR—Dr. Tow acted negligently in not admitting Holt to the hospital for an immediate consultation with a cardiologist. Instead, Dr. Tow told Holt that he was dehydrated, that he should follow up with his regular cardiologist, and discharged him. The plaintiffs allege that the laboratory data do not support a diagnosis of dehydration and that a syncope episode in someone with severe aortic stenosis strongly indicates a cardiac event requiring immediate emergency treatment and hospitalization. Dr. MacGregor's testimony addressed Dr. Tow's diagnosis and treatment as compared to the standard of care, and medical causation.

**B. Dr. MacGregor's Testimony**

Dr. John MacGregor is a board-certified specialist in cardiovascular diseases and interventional cardiology, the Director of the Cardiac Catheterization Laboratory at San Francisco General Hospital, and a professor of medicine at the University of California at San Francisco School of Medicine. (Docket Entry No. 37-5 at 1). Dr. MacGregor testified that he reviewed a number of records, including:

- Holt's January 11, 2016 medical records from St. Luke's;
- Holt's medical records from Southeast Cardiology;

- Holt's medical records from Houston Cardiovascular Associates;
- Holt's medical records from D. Michael Sweeney, M.D.;
- Holt's medical records from Dr. Francois Ferron, M.D.;
- Holt's autopsy report from the medical examiner;
- the depositions of Dr. Kevin Lisman, M.D., Jason Case, R.N., Dr. Michael Sweeney, M.D., Elbert Delacruz, R.N., Dr. Evan Tow, D.O., Kelly Holt, and Rick Holt;
- the EMTALA statute;
- St. Luke's Medical Screening, Stabilization, and Transfer of Individuals with Emergency Medical Conditions policy;
- the American College of Emergency Physicians Clinical Policy: Critial Issues in Evaluation and Management of Adult Patients Presenting to the Emergency Department with Syncope;
- Titinalli's *Emergency Medicine,* 5th Edition, chapter on Syncope;
- 2014 AHA/ACC Guideline for the Management of Patients with Valvular Heart Disease: Executive Summary;
- Dr. Evan Tow's Texas Medical Board Physician Profile; and
- a summary of pertinent facts.

Dr. MacGregor also reviewed the relevant literature. Finally, he drew on his education, training, and experience in forming his opinions, which he stated were based on reasonable medical probability. (Docket Entry No. 37-5 at 2).

Dr. MacGregor testified about Holt's loss of consciousness at 24 Hour Fitness and about the subsequent conduct of the defendants. Dr. MacGregor testified that Holt was suffering from an emergency medical condition when he arrived at St. Luke's on January 11. Holt "had a very severe aortic stenosis and had suffered a syncope episode while exercising . . . ." (Docket Entry No. 37-5 at 3). Dr. MacGregor testified that the description of the events at the 24 Hour Fitness on January

11 shows that Holt had suffered a cardiac event:

> Of course it's a cardiac event. Of course it's a cardiac event, they've described a cardiac event: the guy turns blue, he curls up in a ball, they're doing CPR. So they're describing a cardiac arrest and a resuscitation. It's a cardiac event.

(Docket Entry No. 36, Ex. 6 at 157). Dr. MacGregor testified that "[t]he syncope episode was actually a cardiac arrest precipitated by Mr. Holt's very severe aortic stenosis" and "was immediately life-threatening." (*Id.*). Holt's condition was unstable and "could precipitate another cardiac arrest at any moment, especially if Mr. Holt engaged in exertional activity." (*Id.*). Dr. MacGregor testified that "[t]he only thing that would stabilize Mr. Holt's condition would be for Mr. Holt to have an aortic valve replacement operation." (*Id.*). Because he was not stable and "not given appropriate follow-up care with discharge instructions," Holt's discharge from the emergency room was negligent. "Appropriate follow-up instructions would be to inform Mr. Holt that his syncope episode was most likely caused by his aortic stenosis, that he needed to be evaluated immediately by a cardiologist or cardiothoracic surgeon, and that he needed to refrain from any exertional activity." (*Id.*).

Dr. MacGregor testified that Dr. Tow "failed to have critically important information about Mr. Holt's chief complaint, that after passing out on the treadmill that Mr. Holt started turning blue and that bystanders revived him with cardio-pulmonary resuscitation." (Docket Entry No. 37-5 at 4). "Dr. Tow testified that it was his responsibility to have that information and that if he had that information, he would have worked Mr. Holt up as a cardiac arrest, he would have admitted Mr. Holt to the hospital and recommended a consultation by a cardiologist." (*Id.*).

Dr. MacGregor testified as to his "opinion that if Dr. Tow had advised Mr. Holt to be evaluated immediately by a cardiologist on account of Dr. Tow's admitted concern that his severe

aortic stenosis was related to his syncope spell, that the cardiologist would have recommended an urgent aortic valve replacement, that Mr. Holt would have undergone an aortic valve replacement, and Mr. Holt would have lived a nearly normal life expectancy." (*Id.* at 6). Instead, Dr. MacGregor testified, "Dr. Tow's advising Mr. Holt and his wife that all that was wrong with him was dehydration was clearly wrong, false, and misleading." (*Id.*). "Dr. Tow admitted that he was concerned about Mr. Holt exercising with a severe aortic stenosis. Dr. Tow knew that Mr. Holt should be seen immediately by a cardiologist. However, Dr. Tow did not document or chart that he had any concern about Mr. Holt exercising with severe aortic stenosis or that he believed that Mr. Holt should be seen immediately by a cardiologist." (*Id.*).

Dr. MacGregor also testified about the medical literature on what an ordinarily prudent emergency medicine physician would have done for an emergency room patient presenting Holt's history and symptoms. (Docket Entry No. 37-5 at 11). He testified that the literature makes clear an ordinarily prudent emergency room doctor's duty to learn the history, chief complaint, and presenting medical condition. Dr. MacGregor testified that an ordinarily prudent emergency room doctor would have learned that Holt had passed out while on the treadmill, turned blue, his arms had curled up, and a bystander had performed CPR. Dr. Tow's "failure to know Mr. Holt's chief complaint and presenting medical condition amounted to gross negligence and willful and wanton negligence." (*Id.* at 12). Based on Holt's history, chief complaint, and medical condition, Dr. MacGregor stated, "[a]n ordinarily prudent emergency room physician would have admitted Mr. Holt to the hospital, [and] consulted with a cardiologist to provide Mr. Holt with further medical screening examination." (*Id.*). Despite the fact that Dr. Tow "admitted that he was concerned by knowing that Mr. Holt had severe aortic stenosis and was working out . . . [t]here is no

documentation that Dr. Tow ever told Mr. Holt that his aortic stenosis was an issue or that he should see a cardiologist." Dr. MacGregor opined that this was grossly negligent. (*Id.* at 13).

Finally, Dr. MacGregor testified that, had Dr. Tow acted as an ordinarily prudent emergency room physician, "Mr. Holt would have been admitted to the hospital, Mr. Holt would have been told that he needed to have an aortic valve replacement, and he would have undergone an aortic valve replacement." (*Id.*). Dr. MacGregor testified that if Holt had received the necessary valve-replacement surgery, he would not have suffered the fatal cardiac arrest three months later.

## II. The Legal Standard for Expert Testimony

Under Federal Rule of Evidence 702, a witness may provide expert testimony if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
>
> (b) the testimony is based on sufficient facts or data;
>
> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods of the facts to the case.

FED. R. EVID. 702; *see also Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149 (1999). The United States Supreme Court's decision in *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993), provides the analytical framework for determining whether expert testimony is admissible under that rule. "In *Daubert*, the [] Court explained that Rule 702 assigns to the district judge a gatekeeping role to ensure that scientific testimony is both reliable and relevant." *Johnson v. Arkema, Inc.*, 685 F.3d 452, 459 (5th Cir. 2012) (per curiam). The party offering the expert opinion bears the burden to establish, by a preponderance of the evidence, that it is admissible. *Paz v. Brush Engineered Materials, Inc.*, 555 F.3d 383, 385 (5th Cir. 2009).

To be relevant, expert testimony must "assist the trier of fact to understand the evidence or to determine a fact in issue." *Weiser-Brown Operating Co. v. St. Paul Surplus Lines Inc. Co.*, 801 F.3d 512, 529 (5th Cir. 2015). Reliability depends on "whether the reasoning or methodology underlying the testimony is scientifically valid." *Carlson v. Bioremedi Therapeutic Sys.*, 822 F.3d 194, 199 (5th Cir. 2016). To be reliable, expert testimony must "be grounded in the methods and procedures of science and be more than unsupported speculation or subjective belief." *Arkema*, 685 F.3d at 459; *see also Huss v. Gayden*, 571 F.3d 442, 460 (5th Cir. 2009) ("Courts must be arbiters of truth, not junk science and guesswork."). To establish reliability, an expert must furnish "some objective, independent validation of [his] methodology." *Brown v. Ill. Cent. R.R. Co.*, 705 F.3d 531, 536 (5th Cir. 2013) (alteration in original). "The expert's assurance that he has utilized generally accepted [principles] is insufficient." *Id.*; *see also Kumho*, 526 U.S. at 157 (the court is not required to "admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert."). It is the court's responsibility "to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." *Kumho*, 526 U.S. at 152.

"[A]n expert is permitted wide latitude to offer opinions, including those that are not based on first hand knowledge or observation." *Wellogix v. Accenture, L.L.P.*, 716 F.3d 867, 876 (5th Cir. 2013) (quoting *Daubert*, 509 U.S. at 592). "[T]he basis of an expert's opinion usually goes to the weight, not the admissibility, of the testimony . . . ." *Fair v. Allen*, 669 F.3d 601, 607 (5th Cir. 2012). Occasionally, "the source upon which an expert's opinion relies is of such little weight that the jury should not be permitted to receive that opinion." *Id.* "Expert testimony falls in this category when that testimony would not actually assist the jury in arriving at an intelligent and

sound verdict." *Id.* "Cross-examination at trial, however, is the proper forum for discrediting testimony, and credibility determinations are, of course, the province of the jury." *Dearmond v. Wal-Mart La. LLC*, 335 Fed. App'x 442, 444 (5th Cir. 2009).

**III. Analysis**

Dr. Tow does not presently raise, nor does the court find, any basis to challenge to Dr. MacGregor's qualifications, credentials, or experience in cardiology. Dr. Tow challenges only specific portions of Dr. MacGregor's testimony, arguing that they are "unreliable" and amount to "subjective belief or unsupported speculation." (Docket Entry No. 45 at 7, 16). Dr. MacGregor, Dr. Tow argues, "offers speculative conjecture and contrives facts that do not exist in the record." (Docket Entry No. 45 at 17). The plaintiffs respond that Dr. MacGregor based his opinions on sufficient specific facts and data in the record, which he identified and he explained at length. (Docket Entry No. 49 at 10). The criticisms Dr. Tow raises, the plaintiffs argue, at most go to the weight of the evidence, not to the admissibility of his testimony. (*Id.* at 11). The court agrees.

First, Dr. Tow takes issue with Dr. MacGregor's testimony that Holt was "pulseless" when he passed out while jogging at 24 Hour Fitness on January 11. Dr. Tow argues that no evidence in the record supports that theory. Dr. Tow disputes Dr. MacGregor's use of the term "pulseless," primarily because the record does not include an explicit statement that Holt lacked a detectable pulse when he passed out. The record does not include medical records or a statement from the bystander at the gym who performed CPR showing that Holt was "pulseless."

Dr. MacGregor agrees that there is no direct evidence in the record that anyone determined that Holt lacked a detectable pulse. Instead, Dr. MacGregor explained several times that he based his description of "pulseless" on an inference drawn from the facts and data in the record:

> Q: Where did you get the information that Mr. Holt has no pulse?
>
> A: Well that would be the circumstance under which you would start CPR.
>
> Q: All right. So you're assuming he had no pulse because a layperson began CPR?
>
> A: Also there is a description that he turned blue so that would be another indication that he had no pulse.
>
> . . .
>
> In any event, it's abnormal to turn blue, it's normal to stay, you know, warm and pink, so it's – turning blue is a finding that would go along with cardiac arrest, or at least severe low blood pressure, something you'd see with someone who doesn't have a pulse, which, again, is the reason that a bystander trained in CPR would begin CPR.
>
> . . .
>
> Q: Again, you're assuming that he had no pulse because a bystander performed CPR. There is no specific documentation he had no pulse, is there?
>
> A: Well, again, it's – it's a deduction based on what they did. A trained person that would start CPR would generally have been trained and know that the situation that you do that in is someone without a pulse, and I've already said the fact he turned blue, the fact that he exhibited evidence that he had hypoperfusion of his brain for a period of time; the confusion and so forth also supports that opinion.

(Docket Entry No. 36, Ex. 6 at 46–49).

Dr. MacGregor did not rely on "fatally flawed" or concocted information, as Dr. Tow argues. Dr. MacGregor's testimony is neither subjective belief nor unsupported speculation, as Dr. Tow claims. To the contrary, it is an inference supported by specific, identified facts in the record and Dr. MacGregor's expertise and scientific knowledge. *See Arkema*, 685 F.3d at 459. Dr. MacGregor made clear that he was drawing an inference based on the observations and data shown in the record, and on his medical training and experience. *See, e.g.*, *Wellogix*, 716 F.3d at 876. The observed facts

that Holt turned blue and received CPR, and had a history of heart disease, provided the basis for Dr. MacGregor to infer Holt's "pulseless" condition. The facts on which Dr. MacGregor based his conclusion can be explored on cross-examination. Dr. Tow's arguments go to the weight of Dr. MacGregor's testimony, not its admissibility. *See Allen*, 669 F.3d at 607. The testimony is sufficiently reliable to put before the factfinder to decide the weight to give the inferences Dr. MacGregor draws from the facts. *See Dearmond*, 335 Fed. App'x at 444.

Second, Dr. Tow takes issue with Dr. MacGregor's testimony that Holt suffered a cardiac arrest when he passed out on January 11, 2016. Dr. Tow states that Dr. MacGregor "offers no literature" showing that Holt suffered cardiac arrest and, "[w]hen confronted with adverse literature," that Dr. MacGregor agrees that the mortality rate of people who suffer cardiac arrest outside of the hospital is very high. (Docket Entry No. 45 at 19). Dr. Tow argues that Dr. MacGregor's testimony that Holt suffered a cardiac arrest at the gym on January 11 is therefore "improbable" and a "logical leap." (*Id.*). Dr. Tow points out that the "battery of tests" he ran on Holt did not show cardiac arrest.

Dr. MacGregor testified that he based his opinion that Holt had suffered a cardiac arrest on January 11 on the documented facts in the record. He identified the facts: "that while exercising [Holt] lost consciousness, fell to the ground, started turning blue, his arms started curling up, that cardiopulmonary resuscitation was required to revive him, that he was groggy and in a postictal state after being revived is a classic cardiac arrest." (Docket Entry No. 37-5 at 8). "With Mr. Holt's additional existing very severe aortic stenosis, it would be plainly evident and within the actual knowledge of the nurses and physicians in the emergency department that Mr. Holt's cardiac arrest was caused by his very severe aortic stenosis . . . ." (*Id.*).

Dr. MacGregor testified that he also reviewed the relevant medical literature and drew on his training and experience as a cardiologist in concluding that Holt's documented symptoms showed a cardiac event. *See Carlson*, 822 F.3d at 199; *Allen*, 669 F.3d at 607. Dr. MacGregor's testimony is not "unsupported speculation." Nor does he "leap[] the analytical gap between the facts and [his] conclusion." (Docket Entry No. 45 at 20). Rather, Dr. MacGregor points to specific facts and data on which he based his opinion. Dr. MacGregor's testimony is admissible, and Dr. Tow may develop his criticisms through cross-examination. *See Daubert*, 509 U.S. at 596 ("Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.").

Third, Dr. Tow takes issue with the testimony that he had critical information available at the time he treated Holt, but he failed to obtain this information. Dr. MacGregor testified that Dr. Tow failed to take Holt's patient history or to understand Holt's chief complaint. Dr. Tow argues that Dr. MacGregor's conclusions about the ways in which the treatment fell below the standard of care are based on false assumptions about the information that was available to Dr. Tow.

The parties dispute the extent to which the information about Holt turning blue and his arms curling up when he passed out was available to Dr. Tow at the time he treated Holt. The written EMS report was not sent to St. Luke's until after Holt was discharged. The triage note included the detail about Holt receiving CPR, but the note did not describe the additional facts about Holt turning blue and his arms curling up. Dr. Tow testified that he and Nurse Hamlyn spoke to the EMTs who brought Holt into the emergency room. (Docket Entry No. 36, Ex. 5 at 9, 35–37). Whether the EMTs orally relayed the information contained in the later written report to either Dr. Tow or Nurse Hamlyn is disputed. It cannot be characterized or dismissed as "simply false and misleading," as

Dr. Tow argues. (Docket Entry No. 45 at 21).

Dr. Tow's argument that "he could not possibly have known about the facts as stated in the EMS report, because the EMS report was not written until 18:03—fifteen minutes after Mr. Holt was discharged at 17:48," (Docket Entry No. 45 at 20–21), is equally unavailing. Whether Dr. Tow could have received that information from the EMTs, from Nurse Hamlyn, or from Holt himself are disputed questions.

Dr. MacGregor points to specific facts and data in the record to support his opinion about what information a reasonably prudent emergency room doctor would obtain for a patient with Holt's history and symptoms. Dr. Tow's criticisms once again go to the weight of the evidence, rather than its admissibility. The factfinder will hear the evidence and determine how much weight to give to Dr. MacGregor's opinion. The opinion is, however, sufficiently reliable to be admissible.

Finally, Dr. Tow disputes Dr. MacGregor's opinion that Dr. Tow's treatment proximately caused Holt's death. Dr. MacGregor testified that had Holt's aortic stenosis been properly treated through surgical intervention, he would not have died in April 2016. Had Dr. Tow admitted Holt to the hospital on January 11, and ordered prompt consultation by a cardiologist, Holt would have undergone valve-replacement surgery, which would have likely worked. Instead, Dr. Tow told Holt that his problem was dehydration and discharged him. Holt passed that diagnosis on to Dr. Lisman, his cardiologist. "Had Mr. Holt been correctly informed that his very severe aortic stenosis precipitated his syncope episode, he would have most likely made sure that Dr. Lisman re-evaluate[d] him immediately." (Docket Entry No. 37-5 at 13).

This chain of events, Dr. Tow argues, is speculative, because it depends on unknown facts, including whether Holt would have consented to be admitted and to consult with a cardiologist,

whether Holt would have undergone the surgery, and whether that surgery would have been successful and without complications. Dr. Tow argues that this uncertain chain of events makes Dr. MacGregor's testimony speculative.

"Under Texas law, in a medical malpractice action, the plaintiff bears the burden of proving (1) a duty by the physician or hospital to act according to an applicable standard of care; (2) a breach of that standard of care; (3) an injury, and (4) a causal connection between the breach of care and the injury." *Patel v. Baluyot*, 384 Fed. App'x 405, 408 (5th Cir. 2010) (citing *Quijano v. United States*, 325 F.3d 564, 567 (5th Cir. 2003)). "In a medical malpractice case in Texas, plaintiffs are required to present evidence establishing a 'reasonable medical probability' or a 'reasonable probability' that their injuries were caused by the defendants, 'meaning simply that it is more likely than not that the ultimate harm or condition resulted from such negligence.'" *Smith v. Christus St. Michaels Health Sys.*, 496 Fed. App'x 468, 470 (5th Cir. 2012) (quoting *Jelinek v. Casas*, 328 S.W.3d 526, 533 (Tex. 2010)). "It has long been the law in Texas that a plaintiff in a medical negligence case must 'prove by a preponderance of the evidence that the allegedly negligent act or omission was a proximate cause of the harm alleged.'" *Guile v. United States*, 422 F.3d 221, 225 (5th Cir. 2005) (citing *Bowles v. Bourdon*, 148 Tex. 1, 219 S.W.2d 779, 782 (1949)); *see also Jelinek*, 328 S.W.3d at 533 ("In medical malpractice cases, expert testimony regarding causation is the norm . . . ."). "For the alleged negligence to be a proximate cause of the harm, the harm must have been a foreseeable result of the negligence, and the negligence must have been 'a substantial factor in bringing about the harm, and without which the harm would not have occurred.'" *Id.* (citations omitted).

Dr. MacGregor testified that, based on the information in the record and his training,

experience, and the relevant literature, Holt would have successfully undergone valve-replacement surgery had Dr. Tow admitted him to the hospital on January 11 and promptly involved a cardiologist. (Docket Entry No. 37-5 at 5). Dr. MacGregor explained the basis of his opinion that Holt "had a good prognosis" had he undergone surgery. (Docket Entry No. 36, Ex. 6 at 243). Dr. MacGregor's testimony is consistent with Dr. Lisman's testimony that Holt was a "low surgical risk," (Docket Entry No. 49-3 at 10), and with Dr. Hallman's testimony that Holt's prognosis would have been "less than one percent mortality," (Docket Entry No. 43 at 10). Dr. MacGregor's testimony is grounded in scientific methods and procedures, making it far more than unsupported speculation or subjective belief. The likelihood that the chain of events that they would or would not have occurred goes to the weight, and can be developed on cross-examination and considered by the jury. *See Daubert*, 509 U.S. at 596. It does not make the testimony inadmissible.

## V. Conclusion

The challenges Dr. Tow raises to Dr. MacGregor's testimony do not preclude admissibility. The motion to strike, (Docket Entry No. 45), is denied.

SIGNED on February 5, 2018, at Houston, Texas.

Lee H. Rosenthal
Chief United States District Judge